KEITHLEY

Model 181 Addendum

INTRODUCTION

The following information is supplied as a supplement to this manual in order to provide the user with the latest improvements and corrections in the shortest possible time. It is recommended that this information be incorporated into the Operator's Manual immediately.

Aluminum shields have been added to the Model 181 Digital Nanovoltmeter to eliminate possible radio frequency interference (RFI) related problems.

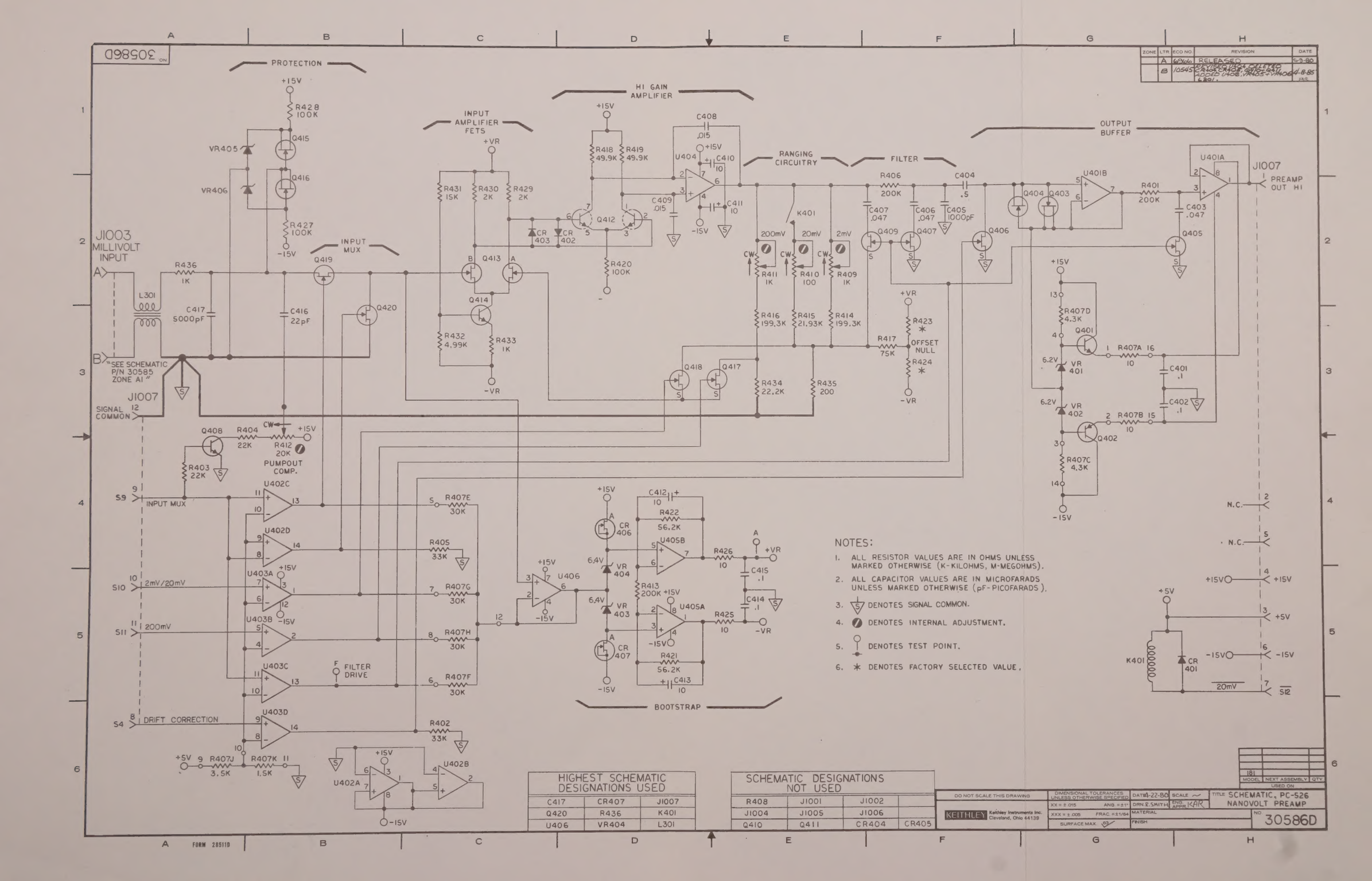
IEEE-488 interface cables with shielded connectors should be used with the Model 181. Two types are available from Keithley: Model 7007-1 (1m/3.3 ft.) and Model 7007-2 (2m/6.6 ft.).

In addition, the nanovoltmeter preamp board has been modified to maintain input resistance of $>10^9\Omega$ with up to 2.2V on mV ranges.

Drawing Level Revisions

The following drawings in the Operator's Manual have been revised. Copies of the updated drawings are attached.

Drawing	New Revision Level
30586	B
30585	D
30583	H



HIGHEST SCHEMATIC DESIGNATIONS USED		
C417	CR407	J1007
Q420	R436	K401
U406	VR404	L301

SCHEMATIC DESIGNATIONS NOT USED			
R408	J1001	J1002	
J1004	J1005	J1006	
Q410	Q411	CR404	CR405

181			
MODEL	NEXT ASSEMBLY	USED ON	QTY

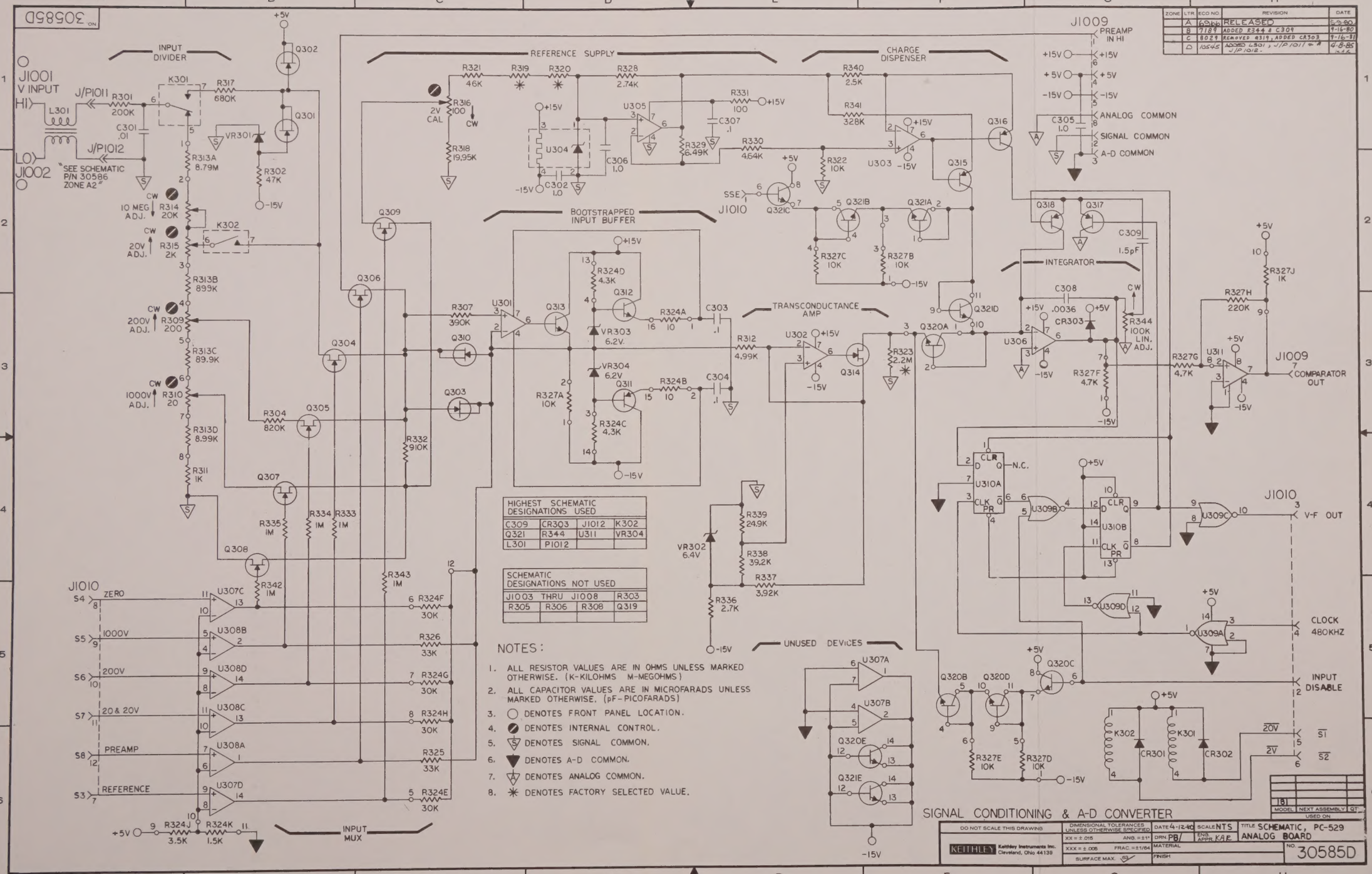
DO NOT SCALE THIS DRAWING | DIMENSIONAL TOLERANCES UNLESS OTHERWISE SPECIFIED: XX = ± .015, ANG. = ±1°, XXX = ± .005, FRAC. = ±1/64, SURFACE MAX. 63 | DATE 4-22-80 | SCALE ~ | DRN. R. SMITH | END APPR. ICAR | MATERIAL | FINISH

KEITHLEY Keithley Instruments Inc. Cleveland, Ohio 44139

TITLE SCHEMATIC, PC-526 NANOVOLT PREAMP

NO. 30586D

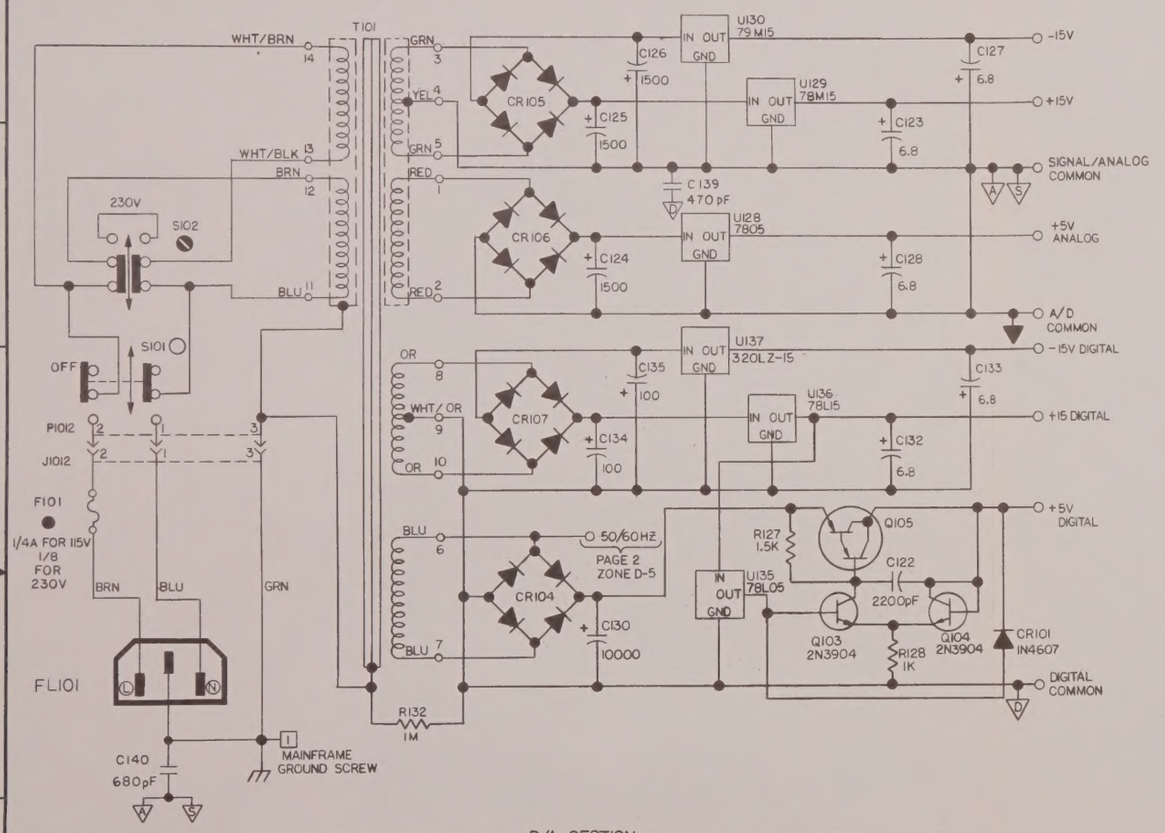
FORM 28511D



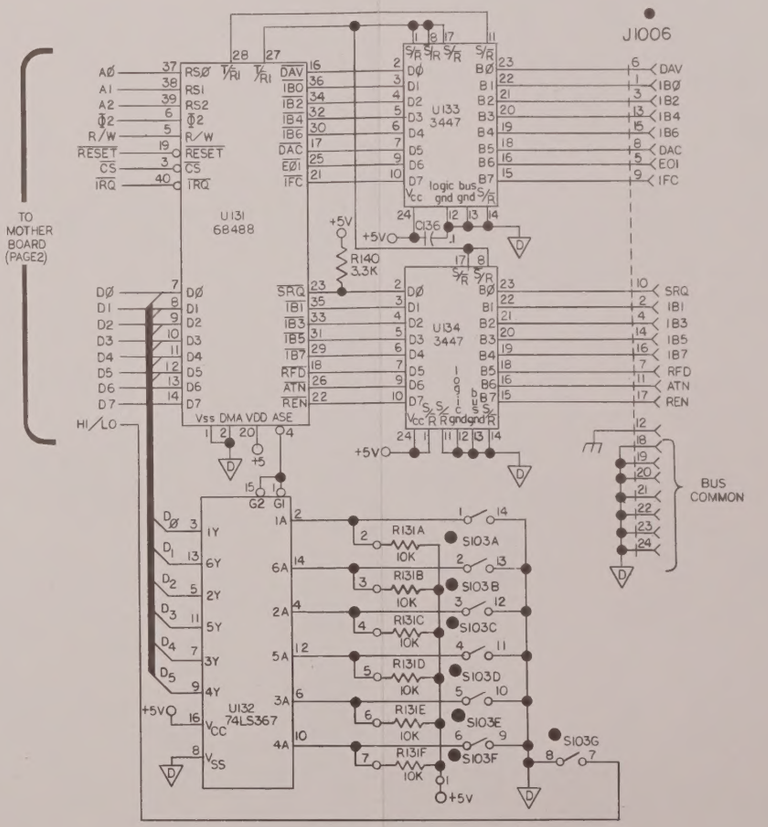
ZONE	LTR	ECO NO.	REVISION	DATE
	A	6986	RELEASED	5-9-80
	B	7189	ADDED R344 & C309	9-16-80
	C	8029	REMOVED CR319, ADDED CR303	9-16-81
	D	10545	ADDED L301, J/P1011 & J/P1012.	4-8-85

ECO NO.	REVISION	DATE
H 10545	CONNECTED PIN 12 OF IEEE CONNECTOR TO CHASSIS GND. ADDED L102.	4-8-85 KAR
D 7501	CHG'D HIGHEST SCH. DESIG. FROM W104 TO W105 (MLB)	1-5-81
E 7481	SEE PAGE 2	1-16-81
F 7460	ADDED C139 & C149 REMOVED C131	2-27-81
G 9357	DELETED A1D1, U103 ADDED R140	10-7-83
A 6946	RELEASED	5-2-80
B 7026	ADDED R135-139 & Q106-109 DELETED VR103-104 & R115 R117-119 WAS 150Ω, R120-121 WAS 120Ω C119 WAS 6.8pF	6-24-80
C 9189	SWITCHED PIN NOS. 2 & 8 OF P1003	3-16-84

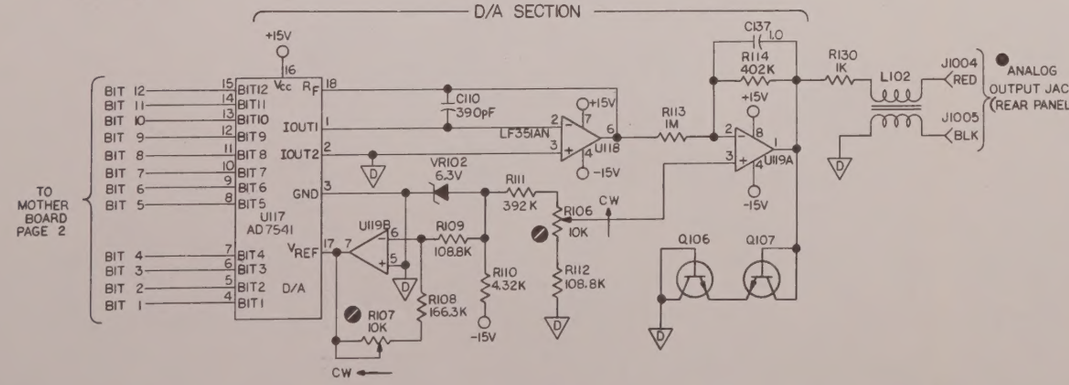
POWER SUPPLY



IEEE SECTION



D/A SECTION



1. ALL RESISTOR VALUES ARE IN OHMS UNLESS OTHERWISE MARKED. (K-KILOHMS, M-MEGOHMS).
2. ALL CAPACITOR VALUES ARE IN MICROFARADS UNLESS OTHERWISE MARKED. (pF-PICOFARADS).
3. ▽ DENOTES SIGNAL COMMON.
4. ▽ DENOTES DIGITAL COMMON.
5. ▼ DENOTES A/D COMMON.
6. ▽ DENOTES ANALOG COMMON.
7. ○ DENOTES FRONT PANEL CONTROL.
8. ● DENOTES REAR PANEL MOUNTING
9. ⊘ DENOTES INTERNAL ADJUST.
10. /// DENOTES CHASSIS CONNECTION.

HIGHEST SCHEMATIC DESIGNATIONS USED			
C140	U137	P1012	W105
Q107	R140	T101	CR107
S103	F101	J1012	L102
FL101	Y102	VR102	AT105

SCHEMATIC DESIGNATIONS NOT USED			
P1001 Thru P1006 & P1011			J1007
J1001 Thru J1003		J1009	J1010
R102	W102	W103	CR102
CR103	W101	VR101	R115
U111 Thru 115			

MODEL	NEXT ASSEMBLY	QTY USED ON
181		

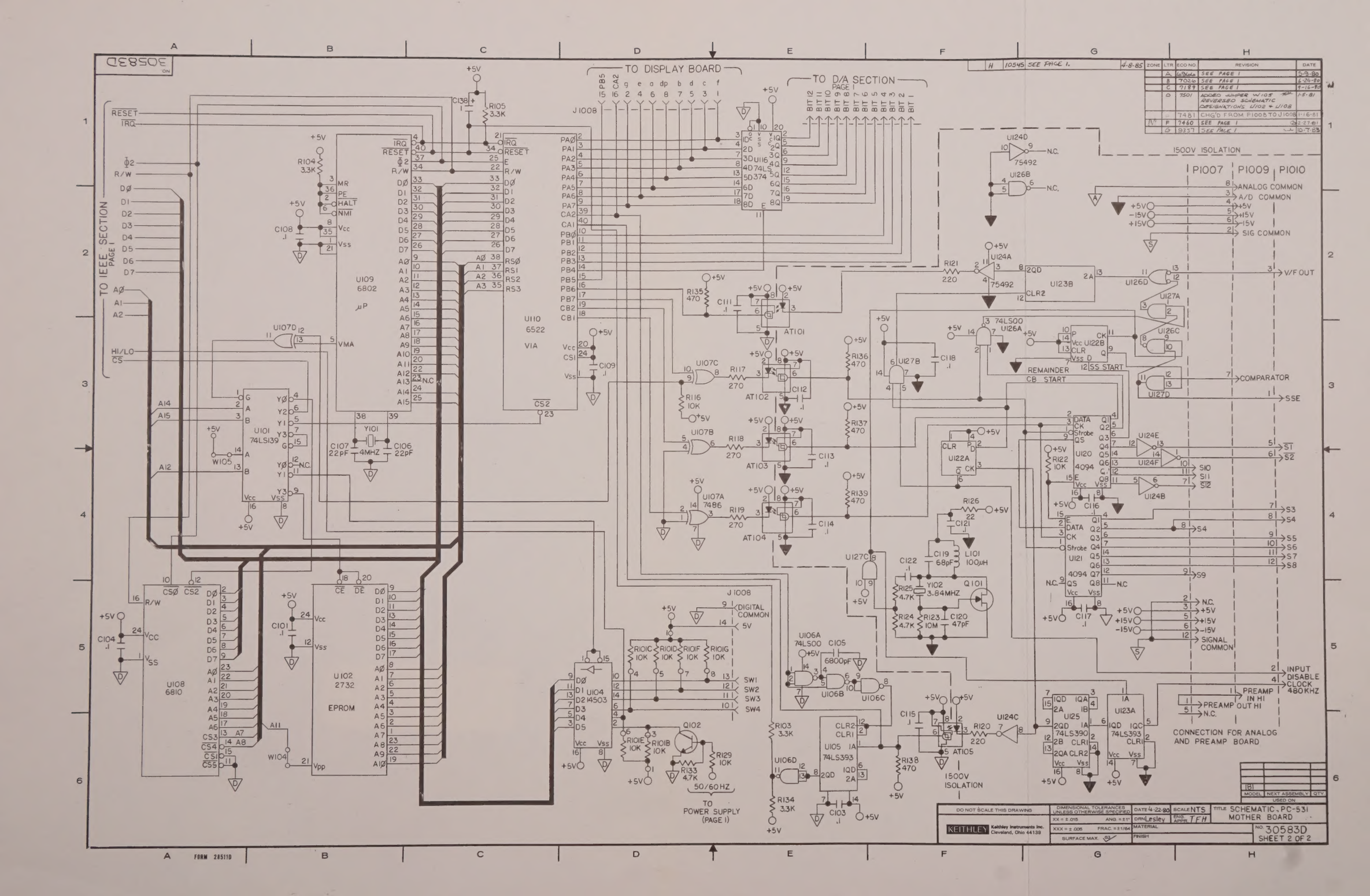
DO NOT SCALE THIS DRAWING — DIMENSIONAL TOLERANCES UNLESS OTHERWISE SPECIFIED: XX = ± .015, ANG. = ± 1°, XXX = ± .005, FRAC. = ± 1/64, SURFACE MAX. 63 — DATE 4-22-80 — SCALE NTS — DR. Lesley — ENG. APPR. TFH — MATERIAL — FINISH

KEITHLEY Keithley Instruments Inc. Cleveland, Ohio 44139

TITLE SCHEMATIC PC-531 POWER SUPPY + IEEE

NO. 30583D SHEET 1 OF 2

FORM 28511D


TO DISPLAY BOARD
TO D/A SECTION
TO IEEE SECTION
PAGE 1
1500V ISOLATION
P1007
P1009
P1010
ANALOG COMMON
A/D COMMON
+5V
-15V
+15V
SIG COMMON
V/F OUT
COMPARATOR
SSE
REMAINDER
CB START
SS START
SIGNAL COMMON
PREAMP IN HI
PREAMP OUT HI
N.C.
INPUT
DISABLE
CLOCK
480KHZ
CONNECTION FOR ANALOG AND PREAMP BOARD
TO POWER SUPPLY (PAGE 1)
50/60HZ
DIGITAL COMMON
U109 6802 µP
U110 6522 VIA
U101 74LS139
U102 2732 EPROM
U104 14503
U105 74LS393
U107 7486
U108 6810
U123B
U124A
U124B
U124C
U124D
U124E
U124F
U125
U126A
U126B
U126C
U126D
U127A
U127B
U127C
U127D
U106A 74LS00
U106B
U106C
U106D
U107A
U107B
U107C
U107D
U120 4094
U121 4094
U122A
U122B
U123A
Y101 4MHZ
Y102 3.84MHZ
Q101
Q102
AT101
AT102
AT103
AT104
AT105
SW1
SW2
SW3
SW4
1500V ISOLATION
MODEL
NEXT ASSEMBLY
QTY
USED ON
DO NOT SCALE THIS DRAWING
DIMENSIONAL TOLERANCES UNLESS OTHERWISE SPECIFIED
XX = ± .015
XXX = ± .005
ANG. = ±1°
FRAC. = ±1/64
SURFACE MAX.
DATE 4-22-80
SCALE NTS
DRN Lesley
APPR TFH
MATERIAL
FINISH
KEITHLEY Keithley Instruments Inc. Cleveland, Ohio 44139
TITLE SCHEMATIC - PC-531 MOTHER BOARD
NO. 30583D
SHEET 2 OF 2
FORM 28511D

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